

**REMARKS**

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 4-8, 10-12, 15 and 16 are pending in the present application. Claim 3 has been canceled and claim 1 has been amended by the present Amendment.

In the outstanding Office Action, the drawings and specification were objected to; claims 1, 3-8, 10-12, 15 and 16 were rejected under 35 U.S.C. § 112, first paragraph; claims 1, 3-8, 10-12, 15 and 16 were rejected under 35 U.S.C. § 112, second paragraph; claims 1, 3-8, 10-12, 15 and 16 were rejected under 35 U.S.C. § 103(a) as unpatentable over Applicant's admitted prior art (AAPA) in view of Tepman et al. or alternatively in view of DeBois et al.; and claims 4 and 10 were rejected under 35 U.S.C. § 103(a) as unpatentable over DeBois et al. in view of AAPA, Tepman et al. and Rempel Nakata.

Regarding the objections to the drawings and specification and the rejection of the claims under 35 U.S.C. § 112, first and second paragraphs, the Office Action indicates the subject matter of the application does not clearly indicate the loading and unloading of the substrate. New Figures 12A and 12B are being added to show the loading and unloading of the substrate. Applicant submits no new matter has been added as the loading and unloading of the substrate are supported by the originally filed application and drawings. Figures 12A and 12B merely illustrate a complete overview of the loading and unloading operation, whereas the original figures are partial views of the elements used in the loading and unloading operation.

In more detail, Figure 12A illustrates the susceptor 30 in a state in which the substrate 34 is being loaded onto the susceptor 30. As shown in Figure 12A, the lift pins 36 are in a retracted

state. Figure 12A also clearly illustrates the sliding portion 42 and the groove 44. In one embodiment, the sliding portion is 10 mm (as recited in claim 1). Figure 12A also illustrates the robot arm 35 carrying the substrate 34 in a forward direction. The robot arm 35 carries the substrate in the forward direction until the substrate 34 starts to slide on the sliding portion 42 and is stopped by a stopper pin 40 (not shown in Figure 12A, but the stopper pin 40 is clearly shown in Figure 5). As shown in Figure 12A, the lift pins 36 are still in the retracted state and are not used because the robot arm 35 supports the substrate 34.

Next, Figure 12B illustrates the substrate 34 having one end that rests on the sliding portion 42 of the susceptor 30. When the end of the substrate 34 slides on the sliding portion 42 and comes to a rest via the stopper pin 40, the substrate 34 has scraped material 45 of the sliding portion 42, and the scraped off material 45 falls into the advantageously placed groove 44. The lift pins 36 are also activated (raised) so as to support the substrate 34. Thus, the substrate 34 is supported by the sliding portion 42 of the susceptor 30 and by the lift pins 36. Therefore, the robot arm 35 can be slightly lowered and removed in a rearward direction such that the substrate 34 is fully supported without use of the robot arm 35. Then a material deposition process etc. can be performed, and after the process is performed, the robot arm 35 is moved in a forward direction to support the substrate 34, the lift pins 36 are retracted (lowered), and the robot arm 35 is moved in the rearward direction to remove the substrate 34 from the processing chamber.

Thus, in light of the above discussion, it is respectfully submitted the figures and descriptions in the specification support the loading and unloading of the glass substrate 34 into and out of the process chamber, the sliding portion, the stopping pins, the groove, and the robot arm 35 supporting a portion of the substrate 34 with a non-supported edge portion freely hanging

over the robot arm 35 such that as the robot arm 35 moves in a forward direction, the non-supported edge portion of the glass substrate slides on the sliding portion 42 of the susceptor 30 and is stopped by at least one stopping pin 40 (see Figure 12B, for example). Also, the substrate 34 having a non-supported edge portion freely hanging over the robot arm 35 is not new matter as original Figure 5 shows this feature, and the Description of the Related Art of the present application describes the problems which occur with the substrate hanging over and scraping off excess material (see paragraph [0020], for example). Figures 2, 5 and 11 have also been amended to more clearly illustrate the features of the present invention. The specification has also been appropriately updated.

Accordingly, in light of the above comments, it is respectfully requested the objections to the drawings and specification and rejection of the claims under 35 U.S.C. § 112, first and second paragraphs, be withdrawn.

Claims 1, 3-8, 10-12, 15 and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over AAPA in view of Tepman et al. or alternatively in view of DuBois et al. This rejection is respectfully traversed.

Independent claim 1 has been amended to include the subject matter recited in dependent claim 3. In particular, independent claim 1 has been amended to clarify that a length of the sliding portion, measured from the groove, is about 10 mm. These features are illustrated in Figures 12A and 12B. As noted in the description of the related art of the present application, when the robot arm 8 puts the glass substrate 4 2-3 mm before a stopper pin 28 from the end of the glass substrate, the substrate becomes unstable upon the transfer and the conveyance of the

robot arm 8 because the gap of the stopper pin 28 and a slide part where the glass substrate 4 is safely placed, is 5 mm. The present invention solves this problem by providing a length of a sliding portion to be 10 mm in combination with the loading and unloading of the substrate as shown in Figures 12A-12C. That is, as noted in the present application in paragraph [0041], to make the transfer stable upon the transfer and the conveyance of the robot arm 35, a slide part of the susceptor 30, that is, the gap between the part where the glass substrate 34 is safely positioned, and the stopper pin 40, is increased to 10 mm. Thus, the transfer by the robot arm 35 becomes stabilized. In addition, because the groove is formed in a sliding portion of the susceptor at a location of the at least one stopping pin, the scraped-off material is advantageously dumped into the groove. Further, the groove and the stopping pin are placed at particularly advantageous locations such that the substrate may safely slide along the sliding portion 42 while scraping off excess material and dumping the excess material in the groove 44.

Tepman et al. and DuBois et al. merely teach grooves that are placed around a particular substrate, but do not teach or suggest the advantageous dimensions of the stopping pin and groove being located at a particular position such that the loading and unloading operation of the substrate is significantly improved. AAPA also does not teach or suggest these features.

Accordingly, it is respectfully submitted independent claim 1 and each of the claims depending therefrom are allowable.

Further, it is respectfully submitted the rejection of claims 4 and 10 under 35 U.S.C. § 103(a) noted in the Office Action has also been overcome as Rempei Nakata also does not teach or suggest the features recited in independent claim 1.

U.S. Application No. 10/029,035  
Response to Final Office Action dated November 16, 2007

Docket No. 3449-0921PUS1  
Art Unit: 1792

### CONCLUSION

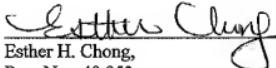
All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact David Bilodeau (Reg. No. 42,325), to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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Attachments: Replacement Drawings (2 Sheets)  
Annotated Drawings (2 Sheets)  
New Drawings (1 Sheet)